# 10A005 THRU 10A10

## 10.0 AMP SILICON RECTIFIERS

**VOLTAGE RANGE**
50 TO 1000 Volts
**CURRENT**
10.0 Amperes

## FEATURES

* Low forward voltage drop
* High current capability
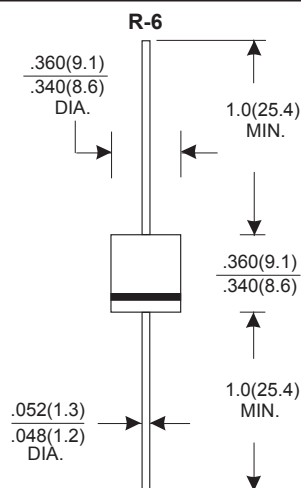* High reliability
* High surge current capability

## MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Lead: Axial leads, solderable per MIL-STD-202, method 208 guranteed
* Polarity: Color band denotes cathode end
* Mounting position: Any
* Weight: 1.65 grams

**R-6**

.360(9.1)
.340(8.6)
DIA.

1.0(25.4)
MIN.

.360(9.1)
.340(8.6)

1.0(25.4)
MIN.

.052(1.3)
.048(1.2)
DIA.

Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature uniess otherwies specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| TYPE NUMBER | 10A05 | 10A1 | 10A2 | 10A4 | 10A6 | 10A8 | 10A10 | UNITS |
|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at Ta=60°C | | | | 10.0 | | | | A |
| Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | | | | 400 | | | | A |
| Maximum Instantaneous Forward Voltage at 10.0A | | | | 1.0 | | | | V |
| Maximum DC Reverse Current          Ta=25°C | | | | 10.0 | | | | μA |
| at Rated DC Blocking Voltage        Ta=100°C | | | | 400 | | | | μA |
| Typical Junction Capacitance (Note 1) | | | | 100 | | | | pF |
| Typical Thermal Resistance RθJA (Note 2) | | | | 10 | | | | °C/W |
| Operating and Storage Temperature Range $T_J$, $T_{STG}$ | | | | -65 — +150 | | | | °C |

**NOTES:**

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal Resistance from Junction to Ambient .375" (9.5mm) lead length.

# RATING AND CHARACTERISTIC CURVES (10A005 THRU 10A10)

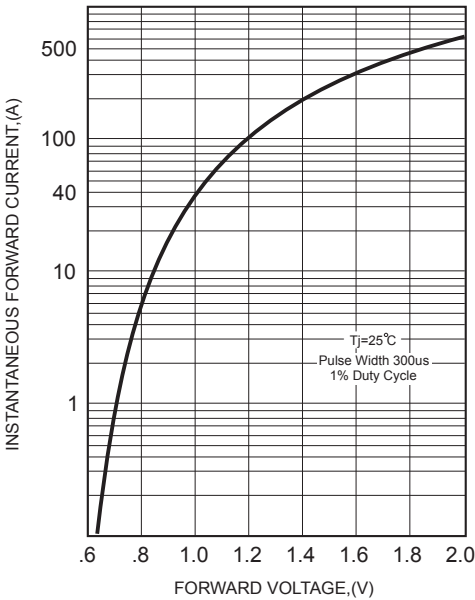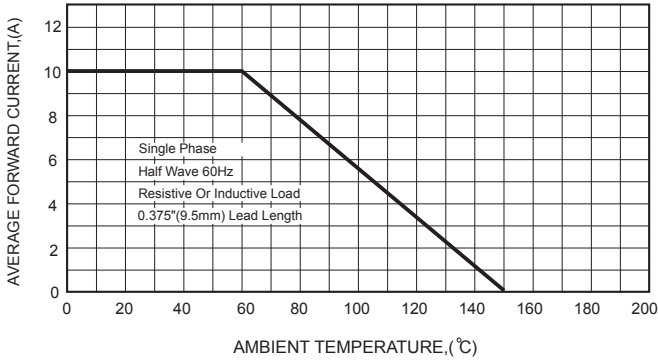## FIG.1-TYPICAL FORWARD CHARACTERISTICS

INSTANTANEOUS FORWARD CURRENT,(A)

FORWARD VOLTAGE,(V)

Tj=25℃
Pulse Width 300us
1% Duty Cycle

## FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

AVERAGE FORWARD CURRENT,(A)

AMBIENT TEMPERATURE,(℃)

Single Phase
Half Wave 60Hz
Resistive Or Inductive Load
0.375"(9.5mm) Lead Length

## FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

PEAK FORWARD SURGE CURRENT,(A)

NUMBER OF CYCLES AT 60Hz

Tj=25℃

8.3ms Single Half
Sine Wave
JEDEC method

## FIG.3 - TYPICAL REVERSE CHARACTERISTICS

REVERSE LEAKAGE CURRENT, (μA)

PERCENT OF RATED PEAK REVERSE VOLTAGE,(%)

Tj=100℃

Tj=25℃

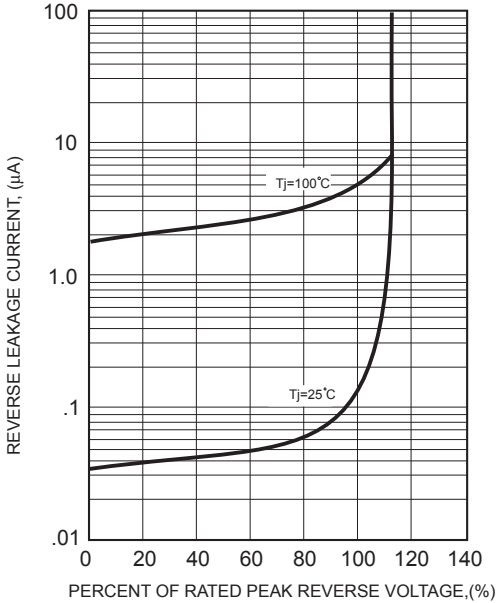## FIG.5 - TYPICAL THERMAL RESISTANCE VS. LEAD LENGTH

THERMAL RESISTANCE, (℃/W)

EQUAL LEAD LENGTH TO HEAT SINK, INCHES